

SECTION 12D: CLOSTRIDIUM DIFFICILE

I. HAND HYGIENE.

A. GENERAL. *C. difficile* is a spore-forming, gram-positive anaerobic bacillus that produces two exotoxins: toxin A and toxin B. It is a common cause of antibiotic-associated diarrhea (AAD). It accounts for 15-25% of all episodes of AAD. Diseases that result from *C. difficile* infections include:

- pseudomembranous colitis (PMC)
- toxic megacolon
- perforations of the colon
- sepsis
- death (rarely)

B. SPECIFIC. Clinical symptoms of ***C. difficile***-associated disease include:

- watery diarrhea
- fever
- loss of appetite
- nausea
- abdominal pain/tenderness

The risk for disease increases in patients with:

- antibiotic exposure
- gastrointestinal surgery/manipulation
- long length of stay in healthcare settings
- a serious underlying illness
- immunocompromising conditions
- advanced age

C. Treatment:

In 23% of patients, *C. difficile*-associated disease will resolve within 2-3 days of discontinuing the antibiotic to which the patient was previously exposed. The infection can usually be treated with an appropriate course (about 10 days) of antibiotics including metronidazole or vancomycin (administered orally). After treatment, repeat *C. difficile* testing is not recommended if the patients' symptoms have resolved, as patients may remain colonized.

D. Transmission:

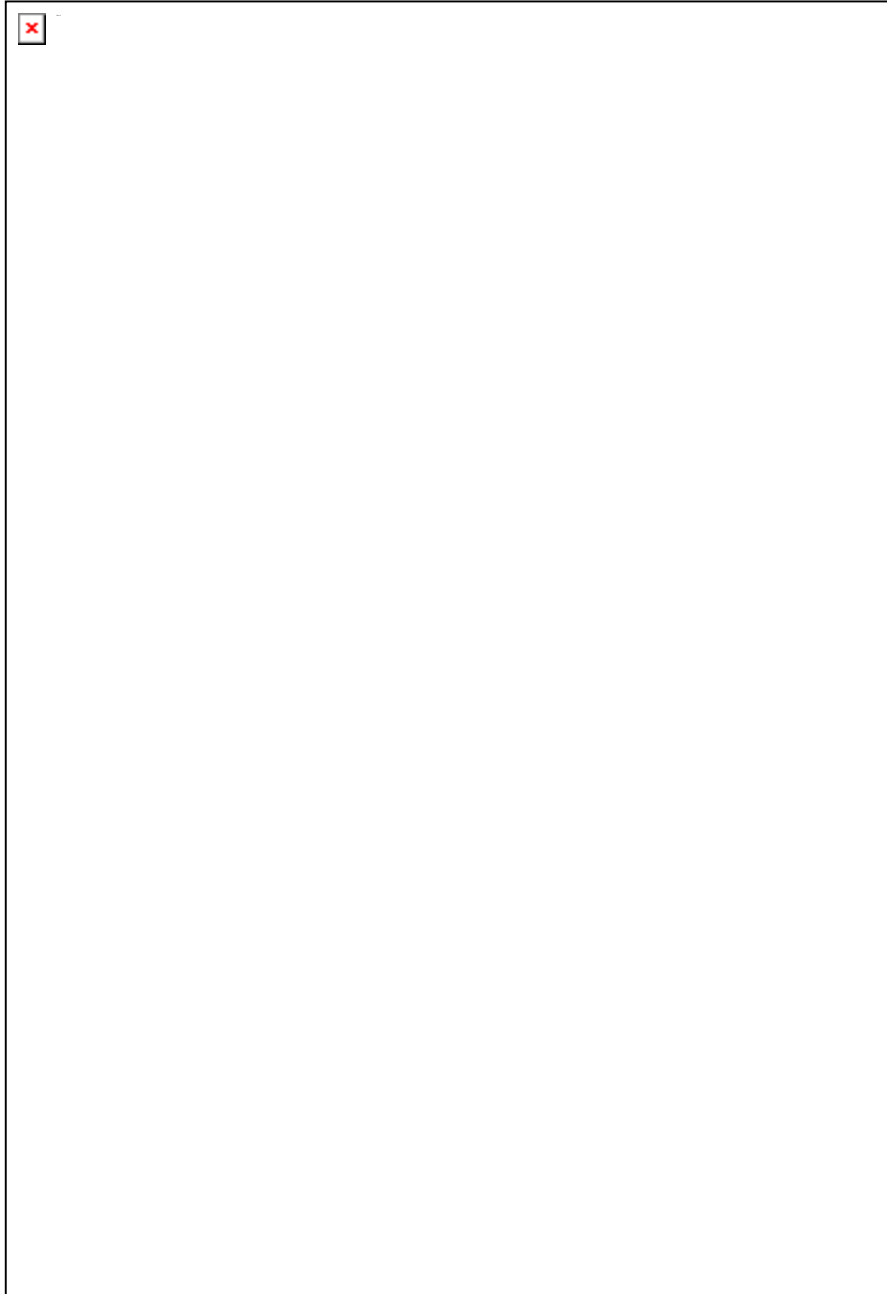
C. difficile is shed in feces. Any surface, device, or material (e.g., commodes, bathing tubs, and electronic rectal thermometers) that becomes contaminated with feces may serve as a reservoir for the *C. difficile* spores. *C. difficile* spores are transferred to patients mainly via the hands of healthcare personnel who have touched a contaminated surface or item.

E. TRANSMISSION PRECAUTIONS

1. Antimicrobial stewardship. Use antibiotics judiciously to reduce risk of AAD.
2. Instrument re-processing. Ensure strict adherence to cleaning, high level disinfection and sterilization of all endoscopes and other devices that will be entering the GI tract.
3. Perform scrupulous Hand Hygiene using either an alcohol-based hand rub or soap and water. During an outbreak, consider using only soap and water for hand hygiene when caring for patients with C. difficile-associated disease; alcohol-based hand rubs may not be as effective against spore-forming bacteria.
4. Use Contact Precautions: for patients with known or suspected C. difficile-associated disease:
 - Place these patients in private rooms. If private rooms are not available, these patients can be placed in rooms (cohorted) with other patients known to have C. difficile-associated disease.
 - Use gloves when entering patients' rooms and during patient care.
 - Wear gowns to enter the room and if soiling of clothes is likely.
 - Dedicate equipment whenever possible.
5. Environmental cleaning and disinfection strategy.
 - a. When a patient is found to have profuse diarrhea, the following protocol will be implemented. Do not wait for the laboratory confirmation of the pathogen.
 - Ensure adequate cleaning and disinfection of environmental surfaces and reusable devices, especially items likely to be contaminated with feces and surfaces that are touched frequently. Extra attention on high touch surfaces.
 - All nursing units have been issued a DHCN –approved, Environmental Protection Agency (EPA)-registered **hypochlorite-based disinfectant for environmental surface disinfection after cleaning in accordance with label instructions (Clorox Spray and Clorox Wipes)** Provide these to the housekeepers and advise of the process for housekeeping in these rooms.
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6. Continue these practices until the patient is discharged, or C. difficile is ruled out and/or diarrhea ceases.

SECTION 12A CLOSTRIDIUM DIFFICILE, continued

Note: alcohol-based disinfectants (Cavicide) are not effective against *C. difficile* and should not be used to disinfect environmental surfaces in the room where a patient with profuse diarrhea resides.



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